CLAIMS

1. A communication system comprising:

a plurality of communication nodes connected by a data link;

a communication controller for allocating link-level addresses to the communication nodes whereby the nodes may be identified for communications over the link;

the communication controller being arranged to change from time to time the addresses allocated to each communication node and transmit the newly allocated address to the respective node in encrypted form.

2. A communication system as claimed in claim 1, wherein communications over the link comprise an address part indicating the address of the one of the nodes to which the respective communication is directed and a payload part.

3. A communication system as claimed in claim 2, wherein the address part is not encrypted.

4. A communication system as claimed in claim 2 or 3, wherein the payload part is encrypted.

5. A communication system as claimed in any preceding claim, wherein communications over the link are in the form of data packets.

6. A communication system as claimed in any preceding claim, wherein the communication system comprises a data distribution unit connected between the data link and at least one external data source for forwarding data from the data source to the nodes via the data link.

7. A communication system as claimed in claim 6, wherein the data distribution unit is arranged to forward the data to the nodes in a random or pseudo-random order.

8. A communication system as claimed in claim 6 or 7, wherein the data distribution unit is arranged to, at at least some times when it would otherwise not be transmitting data to the nodes, transmit over the link communications addressed to an address that is not allocated to any of the nodes.

9. A communication system as claimed in any preceding claim, wherein a node is arranged to store the address allocated to it and to ignore communications on the data channel addressed to addresses other than that address.

10. A communication system as claimed in any preceding claim, wherein the link is an Ethernet link.

11. A communication system as claimed in claim 10, wherein the link-level addresses are Ethernet PHY ID addresses.

12. A method for communicating data in a communication system, the communication system comprising a plurality of communication nodes connected by a data link and a communication controller; the method comprising:

the communication controller allocating link-level addresses to the communication nodes whereby the nodes may be identified for communications over the link;

the communication controller changing from time to time the addresses allocated to each communication node and transmitting the newly allocated address to the respective node in encrypted form.

13. A communication system substantially as herein described with reference to the accompanying drawings.

14. A method for communicating data substantially as herein described with reference to the accompanying drawings.